

Amendments to the Claims

The listing of claims will replace the previous version, and the listing of claims:

Listing of Claims:

1. (currently amended) A microfluidic device for analyzing a sample, comprising:

a base member;

a separating channel formed in the base member;

a sample injecting portion formed at one end of the separating channel;

a sample quantity control channel formed in the base member and branching from the separating channel, said sample quantity control channel having a volume for the sample to be introduced from the sample injecting portion;

a first opening and closing mechanism disposed at the other end of the separating channel, said first opening and closing mechanism being opened when a migration buffer is introduced into the separating channel, and then closed; and

a second opening and closing mechanism disposed at one end of the sample quantity control channel away from the separating channel, said second opening and closing mechanism being closed when the migration buffer is introduced into the separating channel, and opened when the sample injecting portion is immersed into a sample so that the sample is introduced into the separating channel for the volume of the sample quantity control channel while the migration buffer in the separating channel enters the sample quantity control channel by capillary phenomenon.

2. (original) A microfluidic device as claimed in claim 1, further comprising a projection projecting from the base member to

communicate with the separating channel, and having a distal end forming the sample injecting portion.

3. (original) A microfluidic device as claimed in claim 2, wherein said base member includes a lower surface from which said projection projects, and an upper surface having an opening for the other end of the separating channel and an opening for the one end of the sample quantity control channel, said first and second opening and closing mechanisms being disposed in the respective openings.

4. (original) A microfluidic device as claimed in claim 1, wherein said first and second opening and closing mechanisms are valves.

5. (original) A microfluidic device as claimed in claim 1, wherein said base member is formed of first and second plates laminated together.

6. (currently amended) An analyzing method for analyzing a sample, comprising the steps of:

filling a migration buffer in a separating channel while a sample quantity control channel branching from the separating channel is empty without filling the migration buffer;

introducing the sample into the separating channel from a sample injecting portion of the separating channel for an amount corresponding to a volume of a the sample quantity control channel while the migration buffer in the separating channel is introduced into the sample quantity control channel by capillary phenomenon ~~branching from the separating channel;~~ and

applying a voltage between the sample injecting portion and an end of the separating channel away from the sample injecting portion so that the sample is separated by ~~an~~ electrophoresis.

7. (currently amended) An analyzing method as claimed in claim 6, wherein said step of filling the migration buffer is performed by ~~closing~~ opening a first opening and closing mechanism formed at an end of the separating channel away from the sample injecting portion, and closing a second opening and closing mechanism at the sample quantity control channel located away from the separating channel; and said step of introducing the sample is performed by immersing the sample injecting portion in the sample, and opening the second opening and closing mechanism while the first opening and closing mechanism is closed; after closing the second opening and closing mechanism, the step of applying the voltage is performed.

8. (new) An analyzing method as claimed in claim 7, further comprising the step of immersing the sample injecting portion in the migration buffer after the step of introducing the sample and before the step of applying the voltage.

9. (new) A microfluidic device as claimed in claim 1, further comprising means for holding the sample, to be connected to the sample injecting portion when the sample is introduced into the separating channel, and means for holding the migration buffer, to be connected to the sample injecting portion when the sample is separated by electrophoresis.

10. (new) A microfluidic device for analyzing a sample, comprising:
a base member;
a separating channel formed in the base member;
a sample injecting portion formed at one end of the separating channel;

a sample quantity control channel formed in the base member and branching from the separating channel, said sample quantity control channel having a volume for the sample to be introduced;

a first opening and closing mechanism disposed at the other end of the separating channel;

a second opening and closing mechanism disposed at one end of the sample quantity control channel away from the separating channel; and

a projection projecting from the base member to communicate with the separating channel, and having a distal end forming the sample injecting portion;

wherein said base member includes a lower surface from which said projection projects, and an upper surface having an opening for the other end of the separating channel and an opening for the one end of the sample quantity control channel, said first and second opening and closing mechanisms being disposed in the respective openings.